

## WHAT I CLAIM MY INVENTION IS:

- [44] 1.A windshield heating air appliance is made of a transparent plastic or other transparent materials; said windshield heating air appliance is attached to a windshield through its top, left, right and bottom T or L edges, and its dashboard support edge is attached to a dashboard; said windshield can be consisted of two symmetric parts, which are jointed together during the installation to facilitate shipping; said windshield heating air appliance together with said windshield and said dashboard, complete an assembly referred as "controlled heating air space"; said "controlled heating air space" consumes less than 3% of any automobile interior space; air in said "controlled heating air space" can be quickly heated up and maintained at an optimal temperature through hot air supplied by dashboard air vents.
- [45] 2.Said "controlled heating air space" in accordance with claim 1 evaporates the moisture in the air instantly, prevents fogging of said windshield, and windshield heating air appliance; guarantees the driver excellent visibility through said windshield in a wet or cold climate.
- [46] 3.Said "controlled heating air space" in accordance with claim 1 consumes less than 3% of said automobile interior space; to melt the ice accumulated on said windshield requires heating only said "controlled heating air space" instead of heating said entire automobile interior space, thus significantly increases the heating efficiency, speeds up ice melting, saves energy and reduces pollution.
- [47] 4.A side window cover is made of transparent plastic or other transparent material; since air is a poor thermal conductor, air temperature between a side window and side window cover is higher than said side window temperature in a wet or cold climate;

thus, an additional insulation layer, formed by said side window cover and air between said side window and side window cover, enhances said side window insulation, keeps said side window cover temperature close to an automobile internal air temperature, therefore, significantly reduces fogging of said side window.

[48] 5.A windshield-tinting device contains a rotatable core, said rotatable core is portable, and contains a roll of windshield-tinting plastic, said windshield-tinting plastic has a hard handle attached at its end; to deploy said windshield-tinting device, said hard handle needs to be pulled out and locked into handle holders attached on a windshield heating air appliance; to put away said windshield-tinting device, release said hard handle from said handle holders, said windshield-tinting plastic will be automatically rotated back into said rotatable core; said windshield heating air appliance can be equipped with said windshield-tinting devices to provide a driver alternative sunlight protection.